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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,823

07/07/2004

Yoshimasa Matsuura

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8503

466 7590 02/07/2007

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EXAMINER

DAVIS, JENNA L

ART UNIT

PAPER NUMBER

1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/500,823

Applicant(s)

MATSUURA ET AL.

Examiner

Jenna Davis

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 26, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 recite the limitation, "the length L_{BC} of the boundary line between the composite material layer B and the porous layer C is in the range of 1.2 mm to 2.5 mm." Claim 2 recites the limitation, ""the length L_{DC} of the boundary line between the composite material layer D and the porous layer C are in the range of 1.2 mm to 2.5 mm" These limitations are unclear since the structure of said boundary lines is indefinite. Further, the spatial orientation of said boundary lines is unclear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al. (US 2002/0148764).

Lynn et al. teach a blood collection system including an integral flexible filter (Abstract). The filter includes first and second flexible sheets comprising a meltable material and a depth filter medium comprising a meltable material (pg.1 par.0006). The first and second sheets are made of medical grade plastic material, such as polyvinyl chloride. The filtration medium is made from a fibrous material, which is sandwiched between the two PVC containing sheets. The filtration medium can be arranged in a single layer or in a multiple stack. The medium can include meltblown or spun bonded synthetic fibers such as polyester. Meltblowing and spun bonding are known in the art as methods of producing non-woven fabrics. Thus, the fibrous material of Lynn et al. is non-woven. The filtration medium is a porous material, sized to remove leukocytes (pg.2 par.0033-0034 and Figure 2). According to the invention, a unitary peripheral seal is formed by the application of pressure and heating using radio frequency heating in single process to join the filtration medium and the PVC containing sheets to each other (pg.2 par.0036). Since the PVC containing sheets are a meltable and flexible material it is inherent that the inner fibrous porous layer also comprises the non-porous plastic PVC material. Further, according to Figure 2, there are five layers illustrated: the upper comprises the PVC, the middle fibrous inherently will comprise the polyester porous material as well as the PVC plastic. The second inner layer is inherently a porous material containing the polyester, alone. The third inner layer of the filtration medium is also inherently the polyester porous material comprising the PVC from the outer layer. Since Lynn is using the same materials and the same form of bonding process an article that renders the claimed article obvious would have been created as a person

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having ordinary skill in the art would have appreciated that leaving some of the fibers unmelted would create a stronger mechanical seal about the edges of the product. Note also that Lynn refers to the seal created therein as a composite seal and indicates that the heat softened material of PVC penetrate the interstices of the filtration medium to form a matrix of sheet material commingled with the filtration medium. This further would have suggested leaving at least some of the fibers of the filtration medium unmelted in the manner claimed. It is also inherent that the non-porous material, or PVC, has a lower melting point than the porous polyester material. Thus, Lynn et al. meet the limitation of claim 5. Although Lynn et al. do not explicitly teach the claimed length of boundary line between the inner layer comprising the porous and non-porous material and the porous layer alone it is reasonable to presume that length is inherently between 1.2 mm to 2.5 mm, and as such it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the desired length through the process of routine experimentation in order to arrive at values which offered the optimum thickness in the invention of Lynn et al. and to provide a strong bond between the layers. Further, although Lynn et al. do not explicitly teach the claimed dielectric loss, it is reasonable to presume that said dielectric loss is inherently larger in the non-porous material than that in the porous material. Support for said presumption is found in the use of like materials (porous polyester and non-porous PVC), which would result in the claimed property. The burden is upon the Applicant to prove otherwise. In addition, the presently claimed property would obviously have been present once the claimed product is provided.

Response to Arguments

Applicant's arguments, see pages 11-12 of the response, filed July 26, 2006, with respect to Oka have been fully considered and are persuasive. The rejection of claims 1-9 over Oka has been withdrawn.

In light of the certified copy of the foreign priority document (Japanese 002851/2002) associated with this application, the rejection over Oka has been overcome and is withdrawn.

The Examiner does not find the arguments with regard to the 112, second paragraph persuasive because it is not clear what represents the boundary lines even with the explanation provided. It is not clear what A is intended to represent in Figure 5-1 and the claims remain indefinite.

The arguments with regard to Lynn are not found to be persuasive as Lynn uses the same materials as applicant (plasticized PVC non-porous sheets and polyester non-woven fabrics) in the same type of bonding process (radio frequency heating) and expressly suggests that the PVC under heat and pressure penetrates the interstices of the fabric layers to form a composite bonding layer. This at least suggests that some of the fibers are not melted. Further, as set forth above a person having ordinary skill in the art would have appreciated that by intermingling the fibers and the PVC a stronger mechanical bond would result.

The argument that Lynn does not appreciate the relationship between the boundary line length and the bond strength is not persuasive as Lynn uses the same materials and process to produce the product described therein and such product would inherently and obviously possess these properties when a good bond is provided.

Conclusion

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna Davis whose telephone number is 571-272-3357. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jenna Davis
Primary Examiner
Art Unit 1771

jld